

BOSTON SCIENTIFIC COMPANY, INC. (BSCI), OFFICE PARK RENOVATION, MARLBOROUGH, MA



Summary

BSCI undertook the renovation of a two-story, 30,000 square-foot office building as Phase 1 of a 2-building, 400,000 sq ft project. The general contractor was Payton Construction Corp.; SOS Corp. was demolition subcontractor. The project involved gutting and replacement of interior furnishings and fittings, wall/partition systems, HVAC, electrical, plumbing, and membrane roof. The project was particularly complex because renovation began at the same time as demolition, so that employees could move into parts of the building while other areas were still in construction. The project was carried out to LEED Silver.

Project: 30,000 sq ft renovation; exurban location; private owner
Total Waste Reduction: 92% (702 tons recycled, 62 tons disposed)
Cost Savings: \$49,983, or 63%

Spotlight: Mobile Hampers Improve Material Handling and Flow

Loading dock space was a particular problem, with only two dock slots which had to be reserved for the receipt of new materials as well as all outbound shipments. This was the only location from which wastes could be shipped. The large footprint also entailed long carry distances from locations where wastes were generated.

Payton and SOS addressed this problem by mobilizing over 200 wheeled, soft-sided hampers holding 15-20 bushels (about 1 cy) of wastes, along with four-wheeled rigid dollies to handle bulky materials like studs and partitions. These were spotted at individual work locations, where employees deposited specific wastes into designated containers. Full hampers or dollies were wheeled and staged in the shipping/receiving area. When wastes accumulated in a quantity to fill a dumpster or rolloff, the appropriate container was brought to the dock, loaded, and removed, taking up dock space only for the short time needed to fill the container. Using the hampers and dollies also made for a very clean work site; because wastes were picked up as they were generated, with none left on the floor for later collection.

Cost Savings

The following table documents the cost savings achieved through source separation and recycling:

Material	Tons	Recycling Cost	Avoided Disposal Cost	Savings
Furnishings	470	\$0	\$37,125	\$37,125
Wallboard Partitions	93	\$8,000	\$12,787	\$4,787
Metals	65	\$0	\$8,125	\$8,125
Wire and Cable	10	\$0	\$1,250	\$1,250
Ceiling Tiles	19	\$4,980	\$5,706	\$726
Plate Glass	2	\$0	\$300	\$300
Mixed Debris to Recycling	43	\$8,242	\$5,912	(\$2,330)
Recycling Totals	702	\$21,222	\$71,205	\$49,983
Mixed Debris to Disposal	62			
Project Recycling Rate	92%			

Keys to Success: Flexibility and Cooperation

Although careful and early planning is generally a key to successful recycling, this project demonstrates that it's not always necessary. The decision to pursue LEED certification was made when demolition was practically underway. Flexibility and cooperation from all parties to achieve this goal were critical to successful recycling.

Owner, Contractor, and Union Support

- If the owner makes an active commitment to recycling and maintains interest and involvement throughout, it's a lot easier to bring along the participation of contractors, subcontractors, and their employees.
- Involvement and support from the GC's on-site managers are critical. If they are committed to recycling, this commitment filters down to everyone else on the site.
- Union representatives can play a key role in recycling success. If they understand the rationale and goals for recycling, and understand that recycling can make work simpler and more rewarding, they will generally jump on board, as they did at BSCI.

On-Site Presence. Make sure the recycling coordinator is a visible member of the project management team and is frequently on site. This reinforces the importance of recycling, and assures that recycling questions and issues can be addressed as they come up.

Training and Communications. Make sure that everyone who comes to work on the site receives proper instruction in recycling goals and procedures, knows how materials are to be separated and handled, and knows whom to contact with questions.

Shifting on the Fly. With a tight time line, you can't always be locked into pre-existing plans, markets, or hauling arrangements. Be willing and ready to identify new outlets for nontraditional materials, shift markets to optimize recycling rates or costs, or bring in a new hauler who can respond to particular needs as they change over time.

Project Team

Building Owner:	Boston Scientific Company, Inc., One Boston Scientific Place, Natick, MA 01760-1537.
General Contractor:	Payton Construction Corporation, 273 Summer St., Boston, MA 02210. Telephone 617-423-9035.
Demolition Subcontractor:	SOS Corp., 331 West Street, Milford, MA 01757. Telephone 508-473-0466. Web: www.soscorp.net .
Recycling Consultant:	The Institution Recycling Network, 7 South State Street, Concord, NH 03301. Telephone 603-229-1960. Web: www.WasteMiser.com . Email info@ir-network.com .